I claim:

1. A compressor with means for controlling the rate of compression and the distribution of compressed gas for recovery and injection using the pressure of natural gas from an oil and gas well.

2. The compressor in claim 1 wherein said compressor is a heat exchanging compressor with means for controlling stroke frequency.

3. The compressor in claim 1 wherein the pressure of natural gas from said oil and gas well controls the rate of compression, the distribution of compressed gas for recovery and injection into said well, and the flow of a compressing fluid into said compressor.

4. The compressor in claim 1 with at least two compressing means in fluid communication.

5. The compressor in claim 4 operating inside a pressure vessel.

6. The compressor in claim 5 with a filter/hydraulic fluid reservoir and power source located

7. The compressor in claim 5 where said pressure vessel is a separator.

8. The compressor in claim 5 with a free floating rod and piston.

9. The compressor in claim 8 wherein said rod and piston automatically adjust their velocity and stroke distance to those required to pump fluids from said pressure vessel.

10. The compressor in claim 9 wherein said rod and piston automatically adjust their reciprocating rates to those required to pump fluids from changing wellhead pressures.

11. The compressor in claim 9 wherein said rod and piston automatically adjust their reciprocating rates to those required to pump fluids from changing pipeline pressures.

12. The compressor in claim 5 with a power source that is external from said pressure vessel.

13. The compressor in claim 5 immersed in fluids in said pressure vessel and wherein heat generated during compression is exchanged to heat fluids being compressed, thereby producing heated and compressed fluids.

14. The compressor in claim 13 wherein said heated and compressed fluids are used as injection fluids to raise fluids from said oil and gas well without interrupting recovery from said well..

15. The compressor in claim 14 wherein said injection fluids are production fluids from an oil and gas well.

16. The compressor in claim 5 wherein said pressure vessel contains

a directional control valve in fluid and electrical communication with said compressing means, and

a hydraulic pumping means.

17. The compressor in claim 16 wherein each of said compressing means includes

a compression cylinder with and inlet, outlet, and a means for fluid and electronic communication with said directional control valve;

a hydraulic ram cylinder with fluid inlet and outlet in fluid communication with said hydraulic pumping means, and a means for fluid and electronic communication with said directional control valve;

a piston with rings and head extending into said compression cylinder;

a ram shaft attached to said piston and extending into said ram cylinder;

a compression cylinder inlet check valve;

a discharge check valve for said compression cylinder; and

a compression cylinder end plate with openings for connecting said inlet and discharge check valves.

18. The compressor in claim 17 wherein the compression cylinder of at least one of said compressing means is in gas communication with said natural gas from said well, and the compression cylinder of at least one of said compressing means is in gas communication with injection tubing in said well during injection and with recovery lines during recovery of excess gas.

19. The compressor in claim 17 wherein the compressing means are connected serially, beginning with a first, lower pressure compressing means and ending with a last, higher pressure compressing means.

20. The compressor in claim 19 with a means for controlling hydraulic fluid volume flow.

21. The compressor in claim 20 wherein said means for controlling hydraulic fluid volume flow utilizes the power from said power source by moving as much volume as possible through said first, lower pressure compressing means, compresses said volume, and moves said compressed volume through said last, higher pressure compression means.

22. The compressor in claim 4 wherein said power source is an electric motor.

23. The compressor in claim 22 wherein said means for controlling hydraulic fluid volume flow is a pressure compensating flow control valve.

24. The compressor in claim 4 wherein said power source is a natural gas engine.

25. The compressor in claim 20 wherein said pumping means is a gear and said means for controlling hydraulic fluid volume flow is a switching valve.

26. The compressor in claim 20 wherein said pumping means is a piston and said means for controlling said hydraulic fluid volume flow is contained in said pumping means.

27. The compressor in claim 20 with two compressing means and wherein said directional control valve includes

a first connection in fluid communication with said ram cylinder of said first compressing means,

a second connection in fluid communication with said ram cylinder of said last compressing means,

a third connection in fluid communication with said hydraulic pumping means,

a fourth connection in fluid communication with said filter/hydraulic fluid reservoir,

a first valve position,

a second valve position,

a third valve position,

a pressure sensing switch in electrical communication with and capable of sensing the hydraulic pressure in said ram cylinder of said first compressing means, and

a pressure sensing switch in electrical communication with and capable of sensing the hydraulic pressure in said ram cylinder of said second compressing means.

28. The compressor in claim 27 wherein the swept volume of said compression chamber of said first compressing means is greater than the swept volume of said compression chamber of said last compressing means.

29. The compressor in claim 28 wherein the swept volume of said compression chamber of said first compressing means is four times the swept volume of said compression chamber of said last compressing means.

30. The compressor in claim 27 wherein

when said directional control valve is in said first position, oil flows from said hydraulic pumping means through said third and first connections to said first compressing means and returns through said second and fourth connections to said reservoir,

when said directional control valve is in said second position, oil flows from said hydraulic pumping means through said third and second connections to said last compressing means and returns through said first and fourth connections to said reservoir, and

when said directional control valve is in said third position, oil flows from said hydraulic pumping means through said third and fourth connections to said reservoir.

31. The compressor in claim 19 wherein the swept volume of said compressing cylinder of each of said compressing means decreases from that of said first compressing means to that of said last compressing means in the same order as each such means is used sequentially by said compressor.

32. The compressor in claim 19 wherein the compressing cylinder of said first compressing means is in fluid communication with said natural gas from said well.

33. The compressor in claim 19 wherein the compressing cylinder of said last compressing means is in fluid communication with injection tubing in said well during injection of fluids into said well.

34. The compressor in claim 19 wherein the compressing cylinder of said last compressing means is in fluid communication with recovery lines during recovery of well fluids.

35. The compressor in claim 19 wherein said means for controlling said rate of compression, stroke frequency and distribution of compressed gas for recovery and injection comprises

a spring loaded inlet valve for said first compressing means to prevent said inlet valve from opening unless the pressure of said natural gas from said well equals or exceeds the load provided by the spring in said inlet valve,

a fluid control means for diverting fluid flow so that said compressor stops compressing said natural gas when the pressure of said gas is less than the load provided by said spring in said inlet valve, and

a distribution means for injecting said compressed gas from said last compressing means into said well and recovering the excess of said gas.

36. The compressor in claim 19 wherein said means for controlling said rate of compression, stroke frequency and distribution of compressed gas for recovery and injection includes

a spring loaded inlet valve for said first compressing means,

a fluid control means, and

a distribution means for injecting said compressed gas from said last compressing means into said well and recovering the excess of said gas.

37. The compressor in claim 36 wherein said spring loaded inlet valve is loaded to prevent said inlet valve from opening unless the pressure of said natural gas from said well equals or exceeds the load provided by the spring in said inlet valve, and said fluid control means diverts fluid flow so that said compressor stops compressing said natural gas when the pressure of said gas is less than the load provided by said spring in said inlet valve.

38. The compressor in claim 37 with two compressing means wherein said fluid control means comprises a 2-way motor valve with diaphragm in gas communication with the outlet side of said spring loaded inlet valve such that said 2-way motor valve is open when said gas pressure is less than the load provided by said spring in said spring loaded valve and otherwise closed, and said distribution means comprises a gas distribution pilot valve with inlet in gas communication with a source of instrument gas and outlet in gas communication with the diaphragm of a 3-way motor valve such that when the flow of said instrument gas is blocked by said gas distribution pilot valve, a first outlet of said 3-way valve is open and a second outlet is closed, but when said instrument gas is flowing through said gas distribution pilot valve to said diaphragm of said 3-way motor valve, said second outlet of said valve is open, and said first outlet is closed.

39. A heater wherein the source of heat is the heat of compression generated by the compressor in claim 1.

40. A heated fluid injection system wherein fluids are heated by the heater in claim 39 and injected into an oil and gas well without interrupting recovery from said well.

41. A lift gas injection system wherein the lift gas is supplied by the compressor in claim 1.